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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 10/549,427 | 10/13/2005 | Shinichi Tanaka | 112857-590 | 9480 |
| 29175 7590 02/19/2008 BELL, BOYD & LLOYD, LLP P. O. BOX 1135 CHICAGO, IL 60690 | | | EXAMINER NISSAN, BARAK | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2141 | |
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| | | | 02/19/2008 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/549,427 | TANAKA ET AL. | |
| | Examiner | Art Unit | |
| | Barak Nissan | 2142 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>9/14/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. This communication is in response to Application No. 10/549,427, filed 9/14/2005, claims 1-22 were cancelled and claims 23-31 have been examined.

Information Disclosure Statement

2. Several foreign documents presented in the IDS filed on September 14, 2005 have not been considered for the following reasons:

37 CFR 1.98(a)(3)(ii) states that if a written English language translation of a non-English language document, or portion thereof, is within the possession, custody or control of, or is readily available to any individual designated in 37 CFR 1.56(c), a copy of the translation shall accompany the statement. Otherwise, A concise explanation of the relevance, as it is presently understood by the individual designated in § 1.56(c) most knowledgeable about the content of the information, of each patent, publication, or other information listed that is not in the English language must be provided, pursuant to 37 CFR 1.98(a)(3)(i).

In the instant case, some documents have not been considered for failure to provide a written English translation, if available, or concise explanation of the relevance.

Specification

3. The disclosure is objected to because of the following informalities: Spelling error: "informtion" on page 27 line 8. Appropriate correction is required.

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 23-25 and 29-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 23, limitations: "means for collecting", "means for comparing", and "means for transmitting" are interpreted to invoke 35 USC 112, sixth paragraph because each means-plus-function limitation recites a function to be performed rather than definite structure or materials for performing that function. The current specification fails to identify the corresponding structure that performs the claimed function. Therefore, the information processing apparatus comprising means for collecting information regarding resources, means for comparing information regarding a resource, and means for transmitting a software cell requesting an execution of the function program is ambiguous since it is unclear as to what the corresponding structure or material or equivalent thereof might be.

As to any claim not specifically discussed, those claims are rejected for the reasons given above.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 23 and 29 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As to claims 23 and 29, use of the word "apparatus" does not inherently mean that the claim is directed to a machine. Only if at least one of the claimed elements of the apparatus is a physical part of a device can the apparatus as claimed constitute part of a device or a combination of devices to be a machine within the meaning of 35 U.S.C. 101.

In the instant case, no physical parts of the apparatus have been claimed. In particular, "capability exchange means for", "apparatus specifying means for", and "processing requesting means for" do not constitute physical parts of the apparatus, but rather appear to be software elements, per se.

Therefore, the apparatus of claims 23 and 29 is rejected under 35 U.S.C. 101 for failing to fall within a statutory category of the invention as being directed to a apparatus of software per se.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 23-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masuoka et al. (US 6,081,826) in view of Suzuoki et al. (US 7,233,998).

8. Regarding claim 23, Masuoka discloses an information processing apparatus (e.g. computer), which is coupled to a plurality of other information processing apparatuses through a network (i.e. computers connected through a network Figure 1 and 2), and carrying out network distributed processing (i.e. distributing computing resources effectively used for executing applications between computers connected to a network, see Abstract, col 1 lines 7-11), the information processing apparatus comprising:

capability exchange (resource manager [e.g. computer 10A]) means for collecting information regarding resources (this limitation is being treated under 35 USC 112 6th paragraph, [i.e. based on executing the applications a computer can use a resource in another computer as one of distributed computing resources by resource manager, col 2 lines 10-13, i.e. a computer can receive data to/from other applications which is operating on the computers 10B-10N, col 6 lines 28-31]) and operating statuses of the other information processing apparatuses (i.e. the communication between the environment managers [11A-11N-within a computer] are operated by a set of message statuses [e.g. setload, ready, rexec], col 11 line 66- col 12 line 8, Figure 6) and creating an apparatus information table (i.e. each computer has a resource table [13A] which stores the resource used to execute the application, col 8 lines 31-42, i.e. copying the resource table for second application and forming a second resource table when it is detected that the communication is executed col 4 lines 24-26) by transmitting software cells (interpreted these cells as data/packets) to all the other information processing apparatuses (e.g. other computers [10A-10N]) on the network (i.e. distributed computing resources executing the computers applications, col 8 lines 43-53), the software cells requesting transmissions of information regarding the other information processing apparatuses (i.e. utilizer [14A-14N in environment manager] receives the request from the application on the contents in the resource table

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determining the load on another computer [using the resources[information] effectively on computers with smallest load, col 7 line 61-col 8 line 6), and by receiving software cells as replies from the other information processing apparatuses (i.e. receiving the data by the reply of a message that the utilizer [14B-14N] request of the environment managers [11B-11N]), the capability exchange (e.g. computers [10A-10N]) means further exchanging information regarding capability with the other information processing apparatuses by transmitting the software cell including information regarding own apparatus as the reply to the other information processing apparatus if the information processing apparatus receives the software cell requesting the transmission of information regarding the information processing apparatus from the other information processing apparatus (i.e. resource table exchanges regarding the status messages received by other computers, Figures 10/11, col 17 line 16- col 18 line 17);

apparatus specifying (utilizer [14A-14N] in the computer compares which processor can execute the application based on the resources that is requested in the resource table) means for comparing information regarding a resource required to execute a function program (this limitation is being treated under 35 USC 112 6th paragraph, [col 9 lines 28-41]), with information regarding the resource and the operating status in the apparatus information table (i.e. the status messages are procedures that reflect based on the resource table for any load changes, for example the status: NEWLOAD, col 9 lines 56-61), and specifying one of the information processing apparatuses capable of executing the function program if the function program retained in the information processing apparatus is executed (i.e. depends on load of the processor where the requests computing resources used to execute the application[e.g. program] col 10 lines 15-33); and

processing requesting (utilizer [14A-14N]) means for transmitting a software cell (interpreted as data/packet) requesting an execution of the function program to the information processing apparatus specified in the apparatus specifying means (this limitation is being treated under 35 USC 112 6th paragraph, [i.e. utilizer waits for activation request from the application [within computer] to request an allocation of the computing resources which can execute the relevant application is detected, col 9 lines 56-61]).

However, Masuoka does not disclose transmitting a software cell including a command, a program and data to the other information processing apparatuses.

Suzuoki discloses the transmitting a software cell (col 3 line 5) including a command (DMA command, Fig. 23), a program and data (e.g. cell object-program and data (102)) to the other information processing apparatuses, and carrying out network distributed processing (Figure 1).

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It would have been obvious to one of ordinary skill in the art at the time of invention was made given the teachings of Masuoka and Suzuoki before them, to modify teachings of Masuoka to transmit a software cell which includes data, command, and program taught in Suzuoki. One would be motivated to combine these teachings because a software cell is a combination of all the resources which include the data which is being transmitted across between computers or apparatus, a command or code for instructions, and a program or application to be executed based on the resources in a table which is within all computers. Masuoka explains that the software cells which are taught in Suzuoki are just resources in a resource table of a computer which the utilizer [14A-in computer] has the capability to execute the application or program of one computer processor based on the resources which are used effectively for load balancing.

9. Regarding claim 24, Masuoka with further teachings of Suzuoki taught the information processing apparatus according to claim 23, as described above, wherein:

the capability exchange (e.g. other computer [10A-10N]) means, if another information processing apparatus is connected to the network, collects information regarding a resource (i.e. table administrator of computer writes into the resource table) and an operating status of the other information processing apparatus (i.e. utilizer executes only the read-out operation for the resource table for the computer, col 8 lines 31-54[Masuoka]) and updates the apparatus information table (i.e. updating the resource table, col 8 lines 7-16, i.e. updating the resource table based on the change in load of a processor, col 9 lines 64-67 [Masuoka]).

10. Regarding claim 25, Masuoka with further teachings of Suzuoki taught the information processing apparatus according to claim 23, as described above, wherein:

the other information processing apparatus has a plurality of processors for processing the function program (computers [10A-10N] have plurality of processors [16A-16N] for executing the application based on the distributed computing resources [change of load] col 9 lines 54-61); and the capability exchange means collects information regarding a resource and an operating status of each of the plurality of processors (i.e. based on the status message [SETLOAD] to notify the change of one of the processors based on the resources table administrator [15A] in writing in the resource table of the computer), and saves these information in the apparatus information table (i.e. the contents of the resource table is stored into the data [203], col 12 lines 22-56).

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11. Regarding claims 26 and 29, these claims comprise the information processing method/system in which one information processing apparatus and another information apparatus are coupled through a network and carrying out distributing processing on a network by transmitting software cells through to other information processing apparatus as described in claim 23. Thus, claims 26 and 29 are rejected upon the limitations as taught in claim 23 which are similar to the limitations of claim 23 in scope and language, thereby same rationale of rejection is applicable.

12. Regarding claims 27 and 30, these claims comprise the information processing method/system for collecting information regarding a resource and an operating status of other processors and updating the apparatus information table as described in claim 24. Thus, claims 27 and 30 are rejected upon the limitations as taught in claim 24 which are similar to the limitations of claim 24 in scope and language, thereby same rationale of rejection is applicable.

13. Regarding claims 28 and 31, these claims comprise the information processing method/system for collecting information regarding a resource and an operating status of each of the plurality of processors, and saving the information in the apparatus information table as described in claim 25. Thus, claims 28 and 31 are rejected upon the limitations as taught in claim 25 which are similar to the limitations of claim 25 in scope and language, thereby same rationale of rejection is applicable.

Conclusion

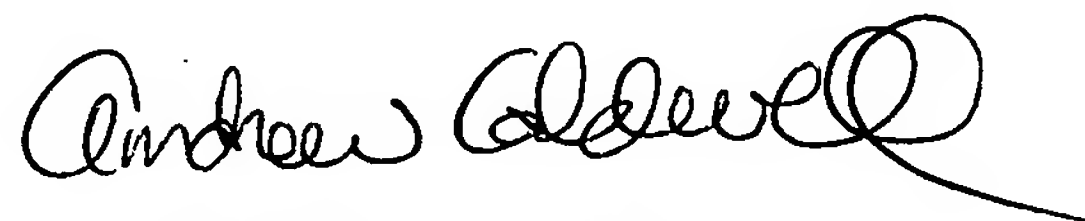
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barak Nissan whose telephone number is (571)-270-3632. The examiner can normally be reached on Mon-Thurs 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571)-272-3836. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Barak Nissan
Patent Examiner

A handwritten signature in black ink, appearing to read "Andrew Caldwell", with a stylized flourish extending from the end.

ANDREW CALDWELL
SUPERVISORY PATENT EXAMINER